

extracting mRNA from winter wheat variety that has undergone a sufficient hardening process:

preparing cDNA and a cDNA library based on said mRNA;

analyzing nucleotide sequences of a number of plant-derived chitinase cDNAs which have all been published by EMBL/Genbank/DDBJ DNA Databank;

designing a pair of chitinase cDNA-specific degenerated primers with reference to highly conserved nucleotide sequence portions of the plant-derived chitinase cDNAs;

conducting PCR (polymerase chain reaction) using a pair of chitinase cDNA-specific degenerated primers and using said cDNA as a template, thereby amplifying fragments of chitinase cDNAs and obtaining amplified DNA fragments; and

using said amplified DNA fragments as probes for screening said cDNA library by a hybridization assay, to isolate recombinant plaques containing full length cDNA.

REMARKS

An Office Action was mailed November 28, 2001. The Office Action is a Restriction Requirement that requires an election between the following inventions:

Group I: recited in claims 12-18, and 23 drawn to polynucleotides encoding chitinase, method of isolating polynucleotides and host cells;

Group II: recited in claims 19-20, drawn to a method of isolating wheat-derived chitinase; and

Group III: recited in claims 21-22, drawn to polypeptides.

The Examiner takes the position that Inventions I, II and III are patentably distinct from each other. The Examiner asserts that the method of Group II neither uses nor makes the products of Group I or III. Applicants have amended the claims of Group II to now define that the method makes the products of Group I. Accordingly, reconsideration and withdrawal of the Restriction Requirement between Groups I and II is believed in order and is respectfully requested.

In response to the Restriction Requirement, Applicants elect Group I, that is claims 12-18 drawn to polynucleotides encoding chitinase, method of isolating polynucleotides and host cells. Applicants also request that the claims of Group II, as amended above, be rejoined and examined with the claims of Group I for the reasons discussed above.

Applicant reserves the right to file one or more divisional applications directed to the claims in the non-elected Groups.

Accordingly, an early examination and an early action on the merits are respectfully requested.

In the event this paper is not considered to be timely filed, Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension, together with any additional fees which may be due with respect to this paper, may be charged to our Deposit Account No. 01-2300.

Respectfully submitted,

ARENT FOX KINTNER PLOTKIN & KAHN, PLLC

A handwritten signature in black ink, reading "Robert K. Carpenter". The signature is fluid and cursive, with a long horizontal stroke extending from the end of the name.

Robert K. Carpenter
Registration No. 34,794

1050 Connecticut Avenue, N.W., Suite 600
Washington, D.C. 20036-5339
Tel: (202) 857-6000

RKC:tdd

Marked-Up Copy of Amendment to Claim

19. (Amended) A method of isolating the [a] winter wheat-derived chitinase cDNA of claim 12 having a nucleotide sequence which encodes an amino acid sequence listed as SEQ. ID. No. 1 in Fig. 1, a winter wheat-derived chitinase cDNA having a nucleotide sequence corresponding to an amino acid sequence listed as SEQ. ID. No. 2 in Fig. 2, a winter wheat-derived chitinase cDNA having a nucleotide sequence corresponding to an amino acid sequence listed as SEQ. ID. No. 3 in Fig. 3, said method comprising the steps of:

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designing a pair of chitinase cDNA-specific degenerated primers with reference to highly conserved nucleotide sequence portions of the plant-derived chitinase cDNAs;

conducting PCR (polymerase chain reaction) using a pair of chitinase cDNA-specific degenerated primers and using said cDNA as a template, thereby amplifying fragments of chitinase cDNAs and obtaining amplified DNA fragments; and

using said amplified DNA fragments as probes for screening said cDNA library by a hybridization assay, to isolate recombinant plaques containing full length cDNA.